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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,563	06/15/2005	Edwin Rijpkema	NL021330	9446

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EXAMINER	
KAO, JUTAI	

ART UNIT	PAPER NUMBER
2616	

NOTIFICATION DATE	DELIVERY MODE
11/01/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary	Application No.	Applicant(s)	
	10/538,563	RIJPKEMA, EDWIN	
	Examiner	Art Unit	
	Ju-Tai Kao	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 June 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/15/2005,9/7/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The meaning of the term "one deep" recited at the end of claim 3 is indefinite and unclear in meaning. Clear definition of the term is required or the claim needs to be amended or canceled.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiussi (US 2003/0142624) in view of Odman (US 2003/0152059).

Chiussi discloses a method for integrating guaranteed-bandwidth and best-effort traffic in a packet network including the following features.

Regarding claim 1, a data switching device (see device 101-1 in Fig. 2) comprising inputs (see input links 201-1 to 201-s in Fig. 2) for guaranteed throughput

and best effort data (see Fig. 5, which shows the incoming Guaranteed Bandwidth (GB) flows 402 and Best Effort (BE) flows 405), outputs (see output links 202-j and 202-s in Fig. 2), a data switch interconnecting the inputs and outputs (see switch fabric 250 in Fig. 2), guaranteed throughput control means coupled for controlling a guaranteed throughput data scheduling (see PWS 401 in Fig. 4) and best effort control means coupled for controlling a best effort data scheduling (see SWS 404 in Fig. 4), characterized in that the guaranteed throughput and best effort control means are arranged for a combined control (see PWS 401, combining GB flows 402 and BE flows via the SWS 404 in Fig. 4) such that the best effort data scheduling is based on a contention free guaranteed throughput scheduling (see "serves the BE aggregate only after having granted to the GB aggregate the sum of the guaranteed service shares of the allocated GB flows" recited in paragraph [0040]).

Regarding claim 2, wherein the data-switching device has at least one guaranteed throughput input buffer for at least one data switch input (see flow queues 502 in Fig. 5).

Regarding claim 3, wherein the at least one guaranteed throughput input buffer is one deep (see Fig. 5, where each flow queue 502 only carries one GB flow).

Regarding claim 4, wherein the data-switching device has one and the same output buffer both for collecting guaranteed throughput and best effort data (see packet RAM 607 in Fig. 6, which carries all packets to be transmitted by the packet transmitter 601, including both the GB and BE flows, as recited in paragraph [0048]).

Regarding claim 5, a data switching method (see switch fabric 250 in Fig. 2), wherein guaranteed throughput and best effort data is scheduled for switching (see Fig. 4, which schedules both GB and BE flows using primary and secondary weighted-round-robin schedulers (PWS and SWS) 401 and 404), characterized in that the best effort data scheduling is based on a contention free guaranteed throughput data scheduling (see "serves the BE aggregate only after having granted to the GB aggregate the sum of the guaranteed service shares of the allocated GB flows" recited in paragraph [0040]).

Regarding claim 6, characterized in that the best effort scheduling is performed after the guaranteed throughput scheduling (see "serves the BE aggregate only after having granted to the GB aggregate the sum of the guaranteed service shares of the allocated GB flows" recited in paragraph [0040]; or see "first...the PWS 401 fulfills the bandwidth requirements of the GB flows" and "second...the PWS 401 distributes fair service to the plurality of BE flows" recited in paragraph [00043]).

Regarding claim 7, characterized in that the guaranteed data scheduling takes one step (see Fig. 4, where the GB flows gets scheduled by only going through the PWS scheduling step 401).

Regarding claim 8, the one step involves a reservation of inputs and/or outputs (see Fig. 4, where the PWS puts the GB flow within the subframe 407, and sending the frame to the outgoing link, thus reserving an output link for the GB flow).

Regarding claim 9, wherein the best effort data scheduling takes one or more multiples of three steps, including the steps: request, grant and accept (see "the single

WRR scheduler grants 0.66 r to the GB flow that remains backlogged, while each BE flow gets 1.66% of the capacity of the server..." recited in paragraph [0039], which shows how the WRR scheduler grants 1.66% of the capacity to the BE flows).

Chiussi does not specifically disclose the following features: regarding claims 1 and 5, wherein the guaranteed throughput scheduling is contention free.

Odman discloses a method for handling asynchronous data in a wireless network including the following features.

Regarding claims 1 and 5, wherein the guaranteed throughput scheduling is contention free (see contention free period 530 in Fig. 5 which includes guaranteed time slots 540, which are used to transmit "isochronous" data, as recited in paragraph [0034]).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Chiussi using features, as taught by Odman, in order to ensure that all guaranteed bandwidth flows could be transmitted while meeting the resource requirements.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiussi (US 2003/0142624) in view of Odman (US 2003/0152059) as applied to claim 9 above, and further in view of Hill (US 2003/0035422).

Chiussi in view of Odman disclose the claimed limitations as described above.

Chiussi and Odman do not disclose the following features: regarding claim 9, wherein a contention resolution for said best effort data scheduling is based on bipartite graph matching.

Hill discloses a packet switching method including the following features.

Regarding claim 10, wherein a contention resolution for said best effort data scheduling is based on bipartite graph matching (see "scheduling of connectionless, best-effort packets ...based on maximum size and maximum weight bipartite graph matching algorithms" as recited in paragraph [0003]).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to further modify the system of Chiussi and Odman using features, as taught by Hill, in order to create conflict-free connections between inputs and outputs of each timeslot (recited in Hill, paragraph [0003]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ju-Tai Kao whose telephone number is (571)272-9719. The examiner can normally be reached on Monday ~Friday 7:30 AM ~5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571)272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KWANG BIN YAO
SUPERVISORY PATENT EXAMINER

Ju-Tai Kao